MATH 6340 – Winter 2006

Graph Theory

Instructor

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Course Info

- Location: Henrietta Harvey Building – Room 3017
- Class Times: to be determined
- Prerequisites: an introductory (typically undergraduate) course in graph theory
- Suggested Textbook: "Introduction to Graph Theory," 2nd edition, by Douglas B. West. ISBN 0-13-014400-2.

Course Outline

The plan is to cover a few topics in detail. I expect that we'll be able to cover each of the following topics. If time permits, we can look at some other topic(s) of interest.

- Matchings: matchings, covers, the König-Egerváry theorem, Hall's theorem, Tutte's 1-factor theorem

- Connectivity: connectivity and edge-connectivity, Menger's theorem, Dirac's fan lemma, Mader's theorem for vertex-transitive graphs

- Edge-Colourings: types of colourings (proper, equalised, equitable, balanced), Vizing's theorem, overfull graphs, Fournier's theorem, the Chetwynd-Hilton-Hoffman theorem, critical graphs, Plantholt's theorem

Method of Evaluation and Related Policies

- Assignment problems will be regularly given. They can be submitted either in class or else to the designated assignment box in the corridor near the Math & Stats General Office.

  Your work should reflect clear content as well as coherent and organised structure. What this effectively means is that your work should be clear to follow and should show a logical progression of thought. If you have to guide me through your work in order to point out your thought process (again, even if your work is correct), then you shouldn't expect to get full credit.

- Plagiarism, cheating, and academic dishonesty will not be tolerated.

- Be aware that not all learning takes place in the classroom. Expect to devote time to ensure that you fully comprehend and understand the material. This will likely entail reading from the textbook, consulting with additional resources, engaging in interactive discussions, as well as doing exercises beyond those which are assigned.

- Final grades will be based upon the following scheme

Homework:	60
Midterm Exam:	20
Final Exam:	20
	100

  Both exams will be take-home in format. March 6–10 is a likely period for the midterm. The final exam will be available by April 7th, with a due date of April 21st.

- Requests for "extra-credit" projects will be denied. Put simply, your grade will be based upon the required course-work as indicated in this syllabus.